

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
**(Under 37 CFR 1.97(b) or 1.97(c))**

Docket No.  
**124457-2 (GE3-0016P)**

In Re Application Of:

**ARIK et al.**

Serial No.

N/A

Filing Date

**September 24, 2003**

Examiner

N/A

Group Art Unit

N/A

Title:

**METHOD AND SYSTEM FOR COOLING HIGH POWER DENSITY DEVICES**

Address to:

**Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450**

**37 CFR 1.97(b)**

1. ☒ The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

**37 CFR 1.97(c)**

2. ☐ The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:

☐ the statement specified in 37 CFR 1.97(e);

**OR**

☐ the fee set forth in 37 CFR 1.17(p).

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**Payment of Fee**

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

- ☐ A check in the amount of \_\_\_\_\_ is attached.
- ☒ The Director is hereby authorized to charge and credit Deposit Account No. **06-1130**  
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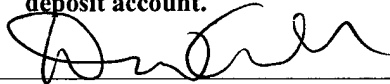
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Dated: September 24, 2003

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<b>FORM PTO 1449</b> (REV 2-32)		<b>U.S. DEPARTMENT OF COMMERCE</b> <b>PATENT AND TRADEMARK OFFICE</b>			File No. 124457-2 (GE3-0016-P)		Serial No. N/A	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use several sheets if necessary)					Applicant(s): ARIK et al.			
					Filing Date: September 24, 2003		Group: N/A	

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	1	5,380,956	01/10/95	Loo et al.	174	252	07/06/93
	2	6,029,742	02/29/00	Burward-Hoy	165	80.4	06/03/97
	3	6,033,506	03/07/00	Klett	156	78	09/02/97
	4	6,119,987	09/19/00	Kiknadze et al.	244	204	07/19/96
	5	6,438,984	08/27/02	Novotny et al.	62	259.2	11/27/01
	6	6,468,150	10/22/02	Langdon et al.	454	184	03/30/01

FOREIGN PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Patents, etc.)							
	7		Abdel-Rahman, E. et al. "Size Considerations in Interfacing Thermoacoustic Coolers with Electronics". 2002 Inter Society Conference on Thermal Phenomena, pages 421-424.				
	8		Afanas'yev, V.N. et al. "Thermohydraulics of Flow Over Isolated Depressions (Pits, Grooves) in a Smooth Wall". Heat Transfer Research, Vol. 25, No. 1, 1993, pages 22-56.				
	9		Afanas'yev, V.N. et al. "Turbulent Flow Friction and Heat Transfer Characteristics for Spherical Cavities on a Flat Plate". Experimental Thermal and Fluid Science, Vol. 7, 1993, pages 1-8.				
	10		Bash, Cullen E et al. "Acoustic Compression for the Thermal Management of Multi-Load Electronic Systems". 2002 Inter Societ Conference on Thermal Phenomena, pages 395, 402.				
	11		Chyu, M.K. et al. "Concavity Enhanced Heat Transfer in an Internal Cooling Passage". IGTI Turbo Expo, Paper No. 97-GT-437, Orlando, 1997, pages 1-7.				
	12		Dickenson, Randall D. et al. "A System Design Approach to Liquid-Cooled Microprocessors". 2002 Inter Society Conference on Thermal Phenomema, pages 413-420.				
	13		Gillespie, D. et al. "Detailed Flow and Heat Transfer Coefficient Measurements in a Model of an Internal Cooling Geometry Employing Orthogonal Intersecting Channels". Paper No. 2000-GT-653, IGTI Turbo Expo, Munich, 2000, pages 1-8.				
	14		Goreloff, V. et al. "The Investigation of Heat Transfer in Cooled Blades of Gas Turbines". AIAA Paper No. 90-2144, 26 <sup>th</sup> Joint Propulsion Conference, Orlando, 1990, page 1-5.				
	15		Heydari, Ali. "Miniature Vapor Compression Refrigeration Systems for Active Cooling of High Performance Computers". 2002 Inter Society Conference on Thermal Phenomema, pages 371-378.				
	16		Kesarev, V.S. et al. "Convective Heat Transfer in Turbulized Flow Past a Hemispherical Cavity". Heat Transfer Research, Vol. 25, 1993, pages 156-160.				
	17		Osgood, Sarah. "Heat Transfer in Carbon Foams". Master's Thesis, Department of Mechanical Engineering, Rensselaer Polytechnic Institute, Troy, NY, December 2001.				

Examiner	Date considered
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.